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NAVIGATING THROUGH THE LEGAL MINEFIELD OF STATE AND FEDERAL FILING FOR PERFECTING SECURITY INTERESTS IN INTELLECTUAL PROPERTY

Christina Lui*

I. INTRODUCTION

Using intellectual property as collateral is more than a mere trend in asset-based financing; it is progressively becoming a staple.¹ In an increasingly technologically savvy society, intellectual property is fast becoming the most valuable asset of many companies.² According to the United States Patent and Trademark Office (USPTO), U.S. intellectual property is worth more than \$5 trillion.³

In today's financial climate, lending evokes a great deal of concern by creditors because credit policies are more stringent in response to the credit market crash in 2008.⁴ Such challenging economic times, however, also present a great incentive for debtors to offer alternative assets as collateral for securing loans.⁵ In expanding the range of

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1. See Darin Neumyer, *Future of Using Intellectual Property and Intangible Assets as Collateral*, THE SECURED LENDER, Jan./Feb. 2008, at 42, 43.

2. See *id.*

3. Press Release 08-16, United States Patent and Trademark Office, USPTO Introduces New Intellectual Property Curriculum (Apr. 14, 2008), available at <http://www.uspto.gov/news/pr/2008/08-16.jsp>.

4. Jason Frank, *Intellectual Property as Collateral: Today's Valuation Realities*, THE SECURED LENDER, Nov./Dec. 2009, at 24, 25.

5. See Peter S. Twombly, *Security Interests in "Exotic" Collateral: The Road to Perfection*, THE SECURED LENDER, Nov./Dec. 2009, at 18, 19.

assets accepted as collateral, creditors need to be aware of specific legal requirements and nuances associated with perfecting their security interests in assets taken as collateral.⁶

A creditor needs to be confident that a debtor not only has the ability to repay the loan, but also in the event of default, that the creditor can assert a priority position in a bankruptcy proceeding or prevail against other creditors of the debtor outside of bankruptcy.⁷ When a company pledges its intellectual property as collateral for a loan, a bank or lending institution has to take measures to ensure the perfection of its security interests in the intellectual property assets.⁸ Otherwise, a creditor risks relegation to the status of an unperfected, or worse, an unsecured creditor, and might be without recourse to the collateral to recover his loan.⁹

The intersection of federal law governing intellectual property and state law regulating secured transactions creates uncertainty as to which law controls the perfection of security interests in intellectual property.¹⁰ The absence of a controlling authority results in creditors making dual filings in both the relevant federal and state offices to ensure perfection of their security interests.¹¹ A dual filing practice is inefficient and reflective of the uncertainty surrounding

6. *See id.*

7. *See* U.C.C. § 9-317(a)(2)(B) (2005) (regarding priority of lien creditors); *see also* U.C.C. § 9-102(a)(52)(C) ("lien creditor" includes trustee in bankruptcy).

8. "Perfection" is a term of art used in Article 9 of the Uniform Commercial Code. JAMES J. WHITE & ROBERT S. SUMMERS, *PRINCIPLES OF SECURED TRANSACTIONS* 54 (West 2007). U.C.C. sections 9-308 to 9-316 identify the procedures a creditor must take to protect his security interests against claims from third persons. *Id.* Compliance with these procedures results in the perfection of a security interest. *See* U.C.C. § 9-308 cmt. 2 (2005); *see also* Twombly, *supra* note 5, at 19.

9. *See* LYNN M. LOPUCKI & ELIZABETH WARREN, *SECURED CREDIT: A SYSTEMS APPROACH* 98 (Aspen Publishers, 6th ed. 2009).

10. *See* David S. Kupetz, *Intellectual Property Issues in Chapter 11 Bankruptcy Reorganization Cases*, *THE SECURED LENDER*, May/June 2003, at 28, 41-42.

11. "Filing" refers to the filing of a financing statement to perfect a security interest. *See* U.C.C. § 9-310(a) & cmt. 2 (2005). Filing provides constructive notice that a secured party has obtained priority over future lenders with regard to the collateral described. *See id.* § 9-509 cmt. 2; *see also* Kenneth B. Axe, *Creation, Perfection and Enforcement of Security Interests in Intellectual Property Under Revised Article 9 of the Uniform Commercial Code*, 119 *BANKING L.J.* 62, 82 (2002).

perfection methods.¹² Consequently, a creditor's vacillation as to his rights and the increased costs resulting from dual filing diminishes the potential for using intellectual property as collateral.¹³

This comment addresses the ambiguity that creditors face in determining the correct place to file a financing statement to perfect security interests in intellectual property. Section II provides an overview of perfection procedures under Article 9 of the Uniform Commercial Code, and addresses the importance of perfecting a security interest.¹⁴ Section III identifies the problems presented by federal laws governing intellectual property that create confusion as to the proper filing office for perfection of security interests in intellectual property.¹⁵ Section IV emphasizes the importance of understanding the nature of the intellectual property collateral at stake.¹⁶ Section V discusses unsuccessful reform attempts aimed at solving the problems created by inconsistent state and federal laws.¹⁷ Finally, Section VI proposes a standardized neutral intellectual property filing system to improve the efficiency and accuracy of the perfection process.¹⁸

II. PERFECTING SECURITY INTERESTS

Article 9 of the Uniform Commercial Code (UCC) governs secured transactions, that is, transactions where a creditor acquires a security interest in collateral owned by the debtor.¹⁹ The American Law Institute and the National

12. See Aneta Ferguson, *The Trademark Filing Trap*, 49 IDEA 197, 199–200 (2009) (discussing the legal uncertainty and problems created by a dual-filing system with regard to perfection of security interests in trademarks).

13. See William Murphy, *Proposal for a Centralized and Integrated Registry for Security Interests in Intellectual Property*, 41 IDEA 297, 297 (2002) (discussing different proposals and then advocating for a centralized and integrated registry that compliments existing substantive federal or state laws by offering a central body of information to those seeking security interest information on intellectual property); see also Jeffrey R. Capwell, *Secured Financing in Intellectual Property: Perfection of Security Interests in Copyrights to Computer Programs*, 39 SYRACUSE L. REV. 1041, 1043 (1988).

14. See *infra* Part II.

15. See *infra* Part III.

16. See *infra* Part IV.

17. See *infra* Part V.

18. See *infra* Part VI.

19. Article 9 of the Uniform Commercial Code (UCC) governs secured transactions. U.C.C. § 9-109(a) (2005). The latest revision became effective in

Conference of Commissioners on the Uniform State Laws promulgated Revised UCC Article 9 in 1998 in response to the increasing variety of financial assets being used in commercial financing transactions.²⁰ All States have since adopted Revised Article 9.²¹ Revised Article 9 aims to “bring greater certainty to financing transactions” in an effort to “reduce both transaction costs and the cost of credit.”²²

The revision was also an attempt to address the emerging needs and technological advances of today’s business environment.²³ For example, the United States is the world’s leader in generating intellectual property,²⁴ giving rise to the burgeoning use of intellectual property in secured transactions.²⁵ In response, Revised UCC Article 9 attempted to address the increasing use of intellectual property as collateral.²⁶ This attempt fell short, however, because the revision could not eliminate the confusion created by the intersection of state law governing secured transactions and federal law regulating different types of intellectual property.²⁷

Before examining how secured transactions law and federal intellectual property law intersect, it is first necessary to understand how secured transactions arise. It is also important to recognize the rights that arise from being a secured party, and the importance of perfecting a security interest.

A. *Creation of a Security Interest*

A secured transaction occurs when a creditor takes collateral to secure the repayment of a loan by a debtor or

2001. U.C.C. § 9-701.

20. See also STEVEN L. SCHWARCZ, BRUCE A. MARKELL & LISSA L. BROOME, *SECURITIZATION, STRUCTURED FINANCE AND CAPITAL MARKETS* 25–26 (LexisNexis 2004).

21. See STEVEN O. WEISE ET AL., *PRACTICE UNDER ARTICLE 9 OF THE UCC: AN UPDATE OF THE NEW ARTICLE 9*, at 3 (Stephen L. Sepinuck ed., American Bar Association 2d ed. 2008).

22. *Id.*

23. See Axe, *supra* note 11, at 63–64.

24. See *The 2009 Legatum Prosperity Index*, LEGATUM INSTITUTE, <http://www.prosperity.com/country.aspx?id=US> (last visited Nov. 8, 2010).

25. See Alice Haemmerli, *Insecurity Interests: Where Intellectual Property and Commercial Law Collide*, 96 COLUM. L. REV. 1645, 1647 (1996).

26. See Axe, *supra* note 11, at 63.

27. See *id.* at 63–64.

when a seller takes a security interest in purchased goods to secure payment of the purchase price.²⁸ In a typical transaction, the debtor signs a security agreement, a legal instrument memorializing the transaction.²⁹ In return, the creditor takes a security interest in some or all of the debtor's assets offered as collateral for the loan.³⁰ This transfer of a property interest from the debtor to the creditor serves as an alternate source of repayment of the loan by giving the creditor rights to repossess and sell the property upon the debtor's default.³¹ Although a security interest is effective against a debtor, when unperfected, a security interest does not protect the creditor against the debtor's other creditors and does not protect against most subsequent transferees of the property.³²

B. The General Rule of Perfection

Perfection of a security interest occurs upon attachment and following the completion of an applicable step.³³ Attachment occurs when the security agreement becomes enforceable against the debtor with respect to the collateral.³⁴

28. See Michael I. Spak, *Filing Nationwide Perfectly or Get With the Trend*, 47 CLEV. ST. L. REV. 11, 13 (1999).

29. See U.C.C. §§ 9-102(a)(73), 9-201 (2005).

30. The UCC defines security interest as "an interest in personal property . . . which secures payment or performance of an obligation." *Id.* § 1-201(35). In other words, a security interest is "a partial interest taken in a debtor's asset—the collateral—to secure a loan." R. Scott Griffin, *A Malpractice Suit Waiting to Happen: The Conflict Between Perfecting Security Interests in Patents and Copyrights (A Note on Peregrine, Cybernetic, and their Progeny)*, 20 GA. ST. U. L. REV. 765, 772 (2004). "Collateral" is the property encumbered by the security interest. U.C.C. § 9-102(a)(12).

31. See U.C.C. §§ 9-609, 9-610; see also SCHWARCZ, MARKELL & BROOME, *supra* note 20, at 30.

32. See WHITE & SUMMERS, *supra* note 8, at 4. In this context, "most subsequent transferees" generally refers to bona fide purchasers for value of the property. A bona fide purchaser for value, and without notice of another's claim to the property, cuts off all equities in the purchased property, thereby limiting the power of the equitable interest from pursuing and claiming the property. See BLACK'S LAW DICTIONARY 1271 (8th ed. 2004). The bona fide purchaser for value "is not affected by the transferor's fraud against a third party and has a superior right to the transferred property as against the transferor's creditor to the extent of the consideration that the purchaser has paid." *Id.*

33. See U.C.C. § 9-308(a) ("[A] security interest is perfected if it has attached and all of the applicable requirements for perfection in Sections 9-310 through 9-316 have been satisfied.").

34. "[A] security interest is enforceable against the debtor and third parties with respect to the collateral only if: (1) value has been given; (2) the debtor has

The determination of the applicable step is dependent on the nature of the collateral and its Article 9 definition.³⁵ The most common applicable step involves the creditor's filing of a financing statement with the designated state recording office.³⁶

C. *The Importance of Perfection & Priority*

Priority rules follow the underlying principle of "first in time, first in right."³⁷ In this sense, priority is like taking a number for a line in a store.³⁸ Just as an earlier number is serviced first, a higher priority ensures that a creditor is first to be repaid among competing claims. Priority accords in the order that a secured creditor files or perfects his security interest.³⁹

Once perfection occurs, a creditor's security interest is no longer subordinate to the rights of other creditors, unless they have a higher priority.⁴⁰ Further, a perfected security interest can withstand an attack in bankruptcy because the rights of the trustee in bankruptcy equate to the rights given to a hypothetical creditor or transferee.⁴¹

Priority principles resolve disputes between creditors and

rights in the collateral or the power to transfer rights in the collateral to a secured party; and (3) one of the following conditions is met: (A) the debtor has authenticated a security agreement that provides a description of the collateral . . ." *Id.* § 9-203(b); *see also id.* § 9-203(a).

35. Perfection can occur automatically, through control, by taking possession, or by filing a financing statement. *See* LOPUCKI & WARREN, *supra* note 9, at 327.

36. *See* U.C.C. § 9-310(a) & cmt. 2 (2005).

37. *See* SCHWARCZ, MARKELL & BROOME, *supra* note 20, at 27.

38. Priority is analogized to taking a number at a store because priority generally functions on a similar first-come-first-served basis. *See* SCHWARCZ, MARKELL & BROOME, *supra* note 20, at 27. That is, the secured party that files a financing statement first gets a higher priority than one who files a later financing statement with the intent to encumber the same collateral. *See* U.C.C. § 9-322(a)(1).

39. *See* U.C.C. § 9-322(a)(1).

40. *See id.* §§ 9-317, 9-322(a)(1).

41. An "attack in bankruptcy" is often used in the field of bankruptcy law to describe the attempt of a bankruptcy trustee or debtor-in-possession to avoid certain statutory liens, e.g., an unperfected security interest that would otherwise be valid outside of a bankruptcy case. 11 U.S.C. § 544(a) (2006) (granting bankruptcy trustee the rights and powers of a judgment lien creditor and allowing trustee to extinguish any interest in the debtor's property that is avoidable by lien creditors); *see also* U.C.C. § 9-317(a)(2)(B) (regarding priority of lien creditors); *see also id.* § 9-102(a)(52)(C) (lien creditors includes trustee in bankruptcy).

other conflicting interests in a debtor's collateral when debtors default or become insolvent, and the value of the collateral is insufficient to satisfy all creditors.⁴² It is crucial for a creditor to perfect his security interest and establish satisfactory priority to ensure the effectiveness of the security interest against all third parties.⁴³

Even if there are no competing claims, filing a financing statement is still essential for a creditor to protect his security interest if the debtor files for bankruptcy.⁴⁴ In the absence of a perfected security interest, a bankruptcy trustee is able to avoid fulfilling the obligations of a security agreement.⁴⁵ Perfection of security interests also protects a creditor's rights in the collateral against a bona fide purchaser or a licensee who gives value without knowledge of the security interest.⁴⁶

III. PUTTING A DENT IN PERFECTION: THE PREEMPTION PROBLEM

The fact that intellectual property serves as collateral in a secured transaction is not dispositive of the applicability of Revised UCC Article 9 as the law governing perfection of a security interest.⁴⁷ Each of the three common categories of intellectual property—copyrights, patents, and trademarks—are governed by separate federal laws.⁴⁸ Interpretation of the respective federal intellectual property statutes can be the pivotal factor that determines where to file.⁴⁹ In addition, the extent of federal protection afforded to the respective intellectual property rights is determined by each individual federal statute.⁵⁰

42. See KIRIAKOULA HATZIKIRIAKOS, SECURED TRANSACTIONS IN INTELLECTUAL PROPERTY: SOFTWARE AS COLLATERAL 182 (LexisNexis Canada 2006).

43. See SCHWARCZ, MARKELL & BROOME, *supra* note 20, at 31.

44. An unperfected security interest cannot withstand an attack by a bankruptcy trustee. See *supra* note 41 and accompanying text.

45. 11 U.S.C. § 544(a).

46. U.C.C. § 9-317(d) (2005); see also *supra* note 32. "Purchaser for value" is defined as "a purchaser who pays consideration for the property bought." BLACK'S LAW DICTIONARY 1271 (8th ed. 2004). Accordingly, "for value" refers to a valuable consideration for the legal title. See *id.*

47. See *infra* Part IV.

48. See *infra* Part IV.

49. See *infra* Part IV.

50. See *infra* Part IV.

A. Federal Law Preemption

Federal law can trump state law through express preemption, field preemption, or conflict preemption.⁵¹ Although none of the federal intellectual property statutes expressly preempt Article 9, all three Intellectual Property Acts provide for registration of interests in intellectual property.⁵² In addition, the Acts can be used for recordation and providing notice of security interests.⁵³ These registrations and recordation provisions “may preempt Article 9 under conflict or field preemption doctrines.”⁵⁴

B. Article 9 Preemption Provisions

Former Article 9 contained two “step-back” provisions that expressed deference to federal law, one broad and one narrow.⁵⁵ The broad step-back provision stated that Article 9 did not apply to security interests subject to any federal statute “to the extent that such statute governs the rights of parties to and third parties affected by transactions in particular types of property.”⁵⁶ The narrow step-back provision stated that a UCC-1 financing statement is unnecessary to perfect a security interest in property subject to any U.S. statute that provides for national registration or a specific place for filing a security interest.⁵⁷

Revised Article 9 eliminated the broad step-back provision and declines complete federal preemption.⁵⁸

51. See *Keams v. Tempe Technical Inst., Inc.*, 39 F.3d 222, 225 (9th Cir. 1994). There is field preemption when federal law implicitly preempts state law by “occupy[ing] the entire field, leaving no room for the operation of state law.” *Id.* (citing *California v. ARC Am. Corp.*, 409 U.S. 93, 100–01 (1989)). Conflict preemption is an inferred preemption when “compliance with both state and federal law would be impossible, or state law stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress.” *Id.*

52. Intellectual Property Acts collectively refers to the Copyright Act, Patent Act, and Lanham Act that govern copyrights, patents, and trademarks respectively.

53. See *infra* Parts IV.

54. Peter S. Menell, *Bankruptcy Treatment of Intellectual Property Assets: An Economic Analysis*, 22 BERKELEY TECH. L.J. 733, 815 (2007).

55. Warren E. Agin, *Federal Preemption Principles—Article 9 Step-back Provisions*, BANKR. AND SECURED LENDING IN CYBERSPACE §9:8 (2009).

56. See U.C.C. § 9-104(a) (1995).

57. See *id.* § 9-302(3)(a).

58. U.C.C. § 9-109(c)(1) (2005) (stating that Article 9 “does not apply to the

Although Revised Article 9 still contains a preemption provision, it is now relatively limited.⁵⁹ Federal law only preempts Revised Article 9 to the extent required by the specific federal statute, however, it does not preempt Article 9 in its entirety.⁶⁰ Federal law governs in situations where preemption is explicit. For example, the filing provisions of Revised Article 9 do not apply to perfecting security interests in property subject to “a statute, regulation, or treaty of the United States whose requirements for a security interest’s obtaining priority over the rights of a lien creditor with respect to the property preempt Section 9-310(a).”⁶¹ Thus, the implication of the preemption provision in U.C.C. section 9-311(a)(1) is that Article 9 only has to defer to federal law where a specific intellectual property statute mandates filing security interests in intellectual property with a national registry.⁶²

Under Revised Article 9, preemption occurs only if two criteria are met.⁶³ First, federal law must fit within the preemption language of Article 9.⁶⁴ Second, to be carved out of the scope of state law governance, the federal statute must demonstrate an intent to create a registration system that would serve the notice function of the UCC filing system.⁶⁵ Thus, preemption is determined by looking to the statutory construction of federal law to determine the intended reach of preemption.

The underlying principle behind preemption is that compliance with federal filing requirements serves as an equivalent to filing a UCC-1 financing statement with the

extent that: (1) a statute, regulation, or treaty of the United States preempts this article.”).

59. *See id.* (Article 9 applies to the extent that a federal statute does not specifically preempt it).

60. *See id.* § 9-109(c)(1) & cmt. 8.

61. *Id.* § 9-311(a)(1).

62. *See* Xuan-Thao Nguyen, *Collateralizing Intellectual Property*, 42 GA. L. REV. 1, 27 (2007).

63. *See infra* notes 64–65.

64. U.C.C. § 9-311(a)(1) (2005).

65. *See In re AvCentral, Inc.*, 289 B.R. 170, (Bankr. D. Kan. 2003) (discussing *Philko Aviation Inc. v. Shackel*, 462 U.S. 406 (1983) (Court recognized Congress’ intent to have the Federal Aviation Act provide for a central recording system that records all interests in civil aircrafts, thus preempting any alternate, state law recording system as applied to interests in civil aircrafts)).

appropriate state office.⁶⁶ The idea of equivalence means “the same” and not “in addition to,” and compliance with federal filing requirements should technically be sufficient, and should not result in the current dual filing practice.⁶⁷

In practice however, the overlapping state and federal provisions have created confusion with regard to the perfection of security interests in, and the recording of transfers and assignments of, intellectual property.⁶⁸ The possibility of preemption makes creditors wary of relying solely on Article 9 to perfect security interests in intellectual property.⁶⁹ Consequently, the pressing issue that needs to be resolved is whether the respective federal statutes governing intellectual property regulate lien rights.⁷⁰

IV. INTELLECTUAL PROPERTY NUANCES: THE CRUCIAL DIFFERENCES

Typically, it is the classification of secured property into one of the categories defined in Revised Article 9 that determines the applicable perfection method.⁷¹ A creditor needs to understand the nature of the intellectual property used as collateral to correctly perfect his security interest.⁷² This is important to help the creditor evaluate his rights with respect to the collateral and determine whether, upon default, the creditor can foreclose on and sell the collateral.⁷³ Failure

66. See U.C.C. § 9-311(b).

67. The definition of equivalent means equal in effect or significance, or corresponding in effect or function. See BLACK'S LAW DICTIONARY 581 (8th ed. 2004).

68. See Menell, *supra* note 54, at 815.

69. See *id.* at 815–16.

70. See Axe, *supra* note 11, at 72.

71. See LOPUCKI & WARREN, *supra* note 9, at 327.

72. Correct identification of the nature of the collateral can play a pivotal role in determination of the correct method of perfection. For example, filing is the only way to perfect security interests in most accounts and general intangibles. See U.C.C. § 9-310(a) (2005). Filing is a permissible method, but not the only option for perfecting security interests in goods, chattel paper, documents, and investment property. See *id.* Filing however, is not a permissible method of perfection with regard to money, deposit accounts, and letter of credit rights, except when those assets are proceeds. See *id.* § 9-312(b). A UCC filing is generally inadequate for goods covered by a certificate of title. See *id.* § 9-311(a)(2)–(3). A UCC filing is also inadequate if federal law calls for federal filing. See *id.* § 9-311(a)(1).

73. Since a secured party that first files a valid financing statement encumbering a certain collateral gets first priority, see *id.* § 9-322(a)(1), it is important to recognize the nature of the collateral at issue to know where to

to understand the nature of intellectual property being used as collateral can hinder the ability of a creditor to effectively perfect his security interest in the intellectual property.

Under Revised Article 9, intellectual property falls under the definition of a “general intangible.”⁷⁴ Perfection of a security interest in general intangibles involves filing a UCC-1 financing statement with the Secretary of State in the jurisdiction where the debtor is located.⁷⁵ The financing statement must indicate the type of collateral, and must state the names of the debtor and the secured party.⁷⁶ The creditor must also obtain authorization from the debtor to file the financing statement.⁷⁷ Filing gives constructive notice to the world that a secured party has obtained priority over future creditors with regard to the collateral described.⁷⁸

Existing case law, however, seems to indicate that federal law governs perfection of a security interest involving certain forms of intellectual property.⁷⁹ Thus, to make a correct assessment as to whether federal or state law governs perfection, it is important to examine the nature of the intellectual property collateral.⁸⁰ It is also important to analyze current case law and evaluate its persuasiveness to determine the appropriate filing office to perfect a security interest in intellectual property.⁸¹ Last, it is necessary to identify the nuances of statutes that could affect perfection methods.⁸²

The three most common forms of intellectual property, as previously mentioned, are copyrights, patents and trademarks. The following discussion of each of these intellectual property forms attempts to highlight the key

properly perfect a security interest. Filing a financing statement under the wrong system could lead to a loss of rights. *See infra* Part IV.A–D.

74. U.C.C. § 9-102(a)(42) & cmt. 5d.

75. Form UCC-1 is a standardized form for filing a security interest with the designated state's filing office. *Id.* § 9-501; *see id.* §§ 9-301, 9-501. The determination of the location of a debtor is determined by U.C.C. section 9-307.

76. *Id.* § 9-502(a).

77. *Id.* § 9-509(a)(1).

78. *See* U.C.C. § 9-509 cmt. 2 (2005).

79. *See infra* Part VI.A–B.

80. *See* Thomas M. Ward, *The Perfection and Priority Rules for Security Interests in Copyrights, Patents, and Trademarks: The Current Structural Dissonance and Proposed Legislative Cures*, 53 ME. L. REV. 391, 413 (2001).

81. *Id.*

82. *Id.*

preemption issues that arise when trying to reconcile the federal intellectual property statutes with Revised Article 9.

A. Copyrights

Relying on statutory language alone, the Copyright Act's recording and priority provisions seem to indicate that security agreements granting security interests in copyrights should be filed with the Copyright Office.⁸³ The Copyright Act delineates the process for recording security interests in copyrights.⁸⁴ The Copyright Act's definition of "transfer of copyright ownership," includes any "assignment, mortgage, exclusive license, or any other conveyance, alienation or hypothecation of a copyright"⁸⁵ The terms 'mortgage' and 'hypothecation' both involve the use of property as collateral to secure a repayment of outstanding debt.⁸⁶ Thus, it seems logical to infer from the statute that a security interest in a copyright constitutes a "transfer of copyright ownership" and qualifies as a transaction governed by federal Copyright law.⁸⁷ A closer examination of case law, however, indicates that the Copyright Act's recording and priority provisions are unclear.⁸⁸

The three leading cases that address the preemptive effect of the Copyright Act on Article 9 are *In re Peregrine Entertainment Limited*, *In re Avalon Software, Inc.*, and *In re World Auxiliary Power Co.*⁸⁹ Although these three decisions attempt to clarify the proper perfection method of copyrights, their holdings are not in complete alignment.⁹⁰

83. See *In re Peregrine Entm't, Ltd.*, 116 B.R. 194 (Bankr. C.D. Cal. 1990).

84. See Menell, *supra* note 54, at 816.

85. 17 U.S.C. §§ 101, 201(d)(1) (2006).

86. "General hypothecation" is defined as "[a] debtor's pledge to allow all the property named in the security instrument to serve as collateral and to be used to satisfy the outstanding debt." BLACK'S LAW DICTIONARY 759 (8th ed. 2004). "Mortgage" is defined as "[a] conveyance of title to property that is given as security for the payment of a debt or the performance of a duty and that will become void upon payment or performance according to the stipulated terms." *Id.* at 1031.

87. See *Peregrine*, 116 B.R. at 198–99.

88. See Ward, *supra* note 80, at 414.

89. See *In re Peregrine Entm't, Ltd.*, 116 B.R. 194 (Bankr. C.D. Cal. 1990); see also *In re Avalon Software, Inc.*, 209 B.R. 517 (Bankr. D. Ariz. 1997); see also *In re World Auxiliary Power Co.*, 303 F.3d 1120, 1128 (B.A.P. 9th Cir. 2002).

90. See Ward, *supra* note 80, at 414.

1. Peregrine Advocates for Full Preemption

The *Peregrine* court was the first to address the appropriate method for perfecting a security interest in a copyright.⁹¹ National Peregrine, Inc. (NPI) was a Chapter 11 debtor-in-possession.⁹² Its main assets were comprised of “copyrights, distribution rights and licenses to . . . films, and accounts receivable arising from licensing of . . . films”⁹³ Capitol Federal Savings, NPI’s creditor, held a security interest in NPI’s inventory of films.⁹⁴ NPI attempted to avoid Capitol’s security interest by alleging that Capitol failed to perfect its security interest in the films’ copyrights because it merely filed a UCC-1 financing statement instead of recording its security interest in the Copyright office.⁹⁵ The court held that “both the perfection and priority rules in Article Nine must yield to the recording and priority provisions of the federal Copyright Act.”⁹⁶ In so holding, the court gave full preemptive effect to the transfer and recording language of the Copyright Act.⁹⁷

The *Peregrine* court based its decision on a statutory analysis of the Copyright Act, the provisions of Article 9, and the purpose of a recording system.⁹⁸ The court noted that the value of a recording system lies in giving parties “a specific place to look in order to discover with certainty whether a particular interest has been transferred or encumbered.”⁹⁹ Such value, it opined, is absent when competing recordation systems exist.¹⁰⁰ Furthermore, given that the Copyright Act and Article 9 set forth different priority schemes that could lead to different results, Article 9 arguably contradicts federal law.¹⁰¹ Such interference warrants preemption of the state law.¹⁰² This argument led the *Peregrine* court to hold that

91. See *Peregrine*, 116 B.R. at 197.

92. *Id.*

93. *Id.*

94. *Id.*

95. *In re Peregrine Entm’t, Ltd.*, 116 B.R. 194, 197 (Bankr. C.D. Cal. 1990).

96. See Ward, *supra* note 80, at 414.

97. See *id.*

98. See *Peregrine*, 116 B.R. at 201–03.

99. *Id.* at 200.

100. See *id.* at 201.

101. See *In re Peregrine Entm’t, Ltd.*, 116 B.R. 194, 201 (Bankr. C.D. Cal. 1990).

102. See *id.*

federal law governs perfection of security interests in copyrights.¹⁰³

The *Peregrine* court also implicitly held that federal law preempts conflicting state law with respect to perfection of security interests in copyright receivables.¹⁰⁴ The Copyright Act does not have specific recordation provisions for the proceeds of copyrights.¹⁰⁵ Judge Kozinski, however, rationalized that since “a copyright entitles the holder to receive all income derived from the display of creative work [under 17 U.S.C. § 106(50)],” such income streams should also be subject to federal law.¹⁰⁶

2. Avalon's Interpretation of Preemption

Avalon involved a dispute between a Chapter 11 debtor and its creditor bank over whether the bank had perfected its security interest in the debtor's software business.¹⁰⁷ *Avalon* can be distinguished from *Peregrine* because the disputed security interests in *Avalon* involved the debtor's entire business, including property that was not intellectual property per se, whereas *Peregrine* dealt exclusively with intellectual property.¹⁰⁸ *Avalon* was a computer software developer who borrowed money from Imperial Bank by granting Imperial a security interest in its “personal property, including accounts, general intangibles, equipment, inventory, and proceeds.”¹⁰⁹ Imperial filed a UCC-1 financing statement with Arizona's Secretary of State, but did not record any security interest with the Copyright Office.¹¹⁰

The *Avalon* court bolstered the decision in *Peregrine* by expressly holding that the Copyright Act governed perfection of security interests in the proceeds of copyrights.¹¹¹ It also held that registering the security interest with the Copyright Office protects “proceeds naturally derived from the

103. *Id.*

104. *Peregrine*, 116 B.R. at 201

105. *See id.* at 199.

106. *Id.*

107. *See In re Avalon Software, Inc.*, 209 B.R. 517, 519 (Bankr. D. Ariz. 1997).

108. *See In re Peregrine Entm't, Ltd.*, 116 B.R. 194, 199 (Bankr. C.D. Cal. 1990).

109. *Avalon*, 209 B.R. at 519.

110. *Id.* at 519–20.

111. *See id.* at 523.

copyrighted material.”¹¹² The court, however, limited preemption of Article 9 to the intellectual property itself.¹¹³ It held that “accounts or receivables created by the servicing and maintenance agreements” under an intellectual property licensing agreement would not be preempted and would fall under the scope of Article 9.¹¹⁴

3. *World Auxiliary Distinguishes Registered and Unregistered Copyrights*

World Auxiliary involved a bankruptcy contest between a bank that perfected a security interest in unregistered copyrights and the buyer of the unregistered copyrights from bankruptcy trustees.¹¹⁵ The copyrights at issue—drawings, technical manuals, blue-prints, and computer software for airplanes—were jointly owned by three companies that never registered the copyrights with the Copyright Office.¹¹⁶ These unregistered copyrights were then offered as security in exchange for a bank loan.¹¹⁷ When the three companies filed for bankruptcy, the unregistered copyrights were “among their major assets” to be sold.¹¹⁸

Under federal Copyright law, the creation of a work automatically triggers and establishes a copyright in the work, regardless of registration.¹¹⁹ But unless the work is registered with the Copyright Office, there will be no record of the copyright.¹²⁰ Thus, a creditor cannot file a security interest in an unregistered copyright with the Copyright Office because record of such a copyright is nonexistent.¹²¹

Courts are split as to how creditors should perfect their security interests in unregistered copyrights.¹²² Some courts hold that unregistered copyrights should be perfected under

112. *Id.* at 521.

113. *In re Avalon Software, Inc.*, 209 B.R. 517, 523 (Bankr. D. Ariz. 1997).

114. *Id.*

115. *See In re World Auxiliary Power Co.*, 303 F.3d 1120, 1122–23 (B.A.P. 9th Cir. 2002).

116. *See id.*

117. *See id.*

118. *Id.*

119. Alicia G. Mills, *Perfecting Security Interests in IP: Avoiding the Traps*, 125 BANKING L.J. 746, 752 (2008).

120. *See id.*

121. *See id.*

122. *Id.*

state law through the filing of a UCC-1,¹²³ while others hold that all security interests in copyrights should be perfected by recordation at the Copyright Office, since the Copyright Act preempts Article 9.¹²⁴ The implication of the latter holding is that owners of unregistered copyrights seeking to use them as collateral are forced to register their respective copyrights with the Copyright Office before creditors can proceed to file and perfect their security interests at the Copyright Office.¹²⁵

World Auxiliary set forth the rule that perfection of security interests in registered copyrights requires filing at the U.S. Copyright Office.¹²⁶ Thus, a UCC-1 filing is insufficient to perfect a lien when registered copyrights are involved.¹²⁷ This straightforward rule is complicated by the fact that Article 9 controls with regard to recording security interests in unregistered copyrights.¹²⁸ *World Auxiliary's* holding overruled the multiple lower court decisions that rejected the perfection of unregistered copyrights under Article 9.¹²⁹ Thus, it is implicit in *World Auxiliary's* holding that preemption of Article 9 only occurs when registered copyrights are at issue.¹³⁰

B. Patents

The Patent Act is a federal statute governing patent-related matters handled by the USPTO.¹³¹ The law controlling whether it is necessary to record a lien with the USPTO to perfect a security interest in a patent is ambiguous.¹³² This is because the Patent Act does not contain a statutory provision expressly preempting Article 9.¹³³ While

123. See *In re World Auxiliary Power Co.*, 303 F.3d 1120, 1128 (B.A.P. 9th Cir. 2002).

124. *Id.*

125. See *AEG Acquisition Corp. v. Zenith Prod. Ltd.*, 127 B.R. 34 (Bankr. C.D. Cal. 1991), *aff'd* 161 B.R. 50 (B.A.P. 9th Cir. 1993); see also *In re Avalon Software, Inc.*, 209 B.R. 517, 522 (Bankr. D. Ariz. 1997).

126. See *World Auxiliary Power*, 303 F.3d at 1128 (holding that the Copyright Act's recordation system preempts Article 9 with respect to registered copyrights).

127. See *id.*

128. See *id.*

129. See *In re World Auxiliary Power Co.*, 303 F.3d 1120, 1129–30 (B.A.P. 9th Cir. 2002).

130. See Ward, *supra* note 80, at 414.

131. 35 U.S.C. § 1 (2006).

132. See Menell, *supra* note 54, at 819.

133. See *id.*

the Patent Act does not indicate the proper procedure for perfecting security interests in patents, it does establish a recording system specifically for “assignment[s], grant[s] and conveyance[s].”¹³⁴ Recording with the USPTO is prima facie evidence of the execution of an assignment, grant, or conveyance of a patent or application for a patent.¹³⁵

The Patent Act illustrates the importance of the scope of an assignment, since the interpretation of the term assignment determines whether the Patent Act preempts Article 9 or whether a state filing is sufficient to protect a creditor’s security interest.¹³⁶ For example, construing assignment to include a grant of a security interest would result in the Patent Act preempting Article 9, whereas interpreting the scope of an assignment to exclude a security interest would mean that Article 9 governs. Courts have held the latter, whereby the Patent Act does not encompass security interests, making state UCC-1 filings sufficient to perfect a security interest in patents.¹³⁷

Courts have gone a step further to hold that filing under state law does not protect against future purchasers of patent rights.¹³⁸ A bona fide purchaser that has duly recorded an assignment at the USPTO trumps a secured creditor with a state filing.¹³⁹ The following cases illustrate that for a secured creditor to be protected against all third parties, the creditor must perfect his security interest by filing a UCC-1 and recording the security interest with the USPTO.¹⁴⁰

134. 35 U.S.C. § 261 (2006).

135. *Id.*

136. *See infra* Part IV.D.

137. *See infra* Part IV.B.1–2.

138. *See Rhone-Poulenc Agro, S.A. v. DeKalb Genetics Corp.*, 284 F.3d 1323 (Fed. Cir. 2002).

139. *See id.*

140. *See In re Cybernetic Servs., Inc.*, 252 F.3d 1039, 1044 (9th Cir. 2001) (holding that federal law does not preempt state governance of security interests in patents); *see also In re Coldwave Systems, L.L.C.*, 368 B.R. 91, 97 (Bankr. D. Mass. 2007) (holding that the assignment of a security interest does not constitute a security interest but a transfer of title); *see also Rhone-Poulenc Agro, S.A.*, 284 F.3d at 1325 (holding that state filing is insufficient to protect against bona fide purchasers or mortgagees for value). The combined holdings with regard to patents indicate that although perfection of a security interest can be achieved through state filing, recordation with the USTPO is still necessary if the creditor wants protection against future purchasers for value. *See Mills, supra* note 119, at 752.

1. *Cybernetic Services Holds Article 9 Governs Perfection of Patents*

Cybernetic Services is the leading case with regard to using patents as collateral. Matsco Inc. and Matsco Financial Corporation (collectively "Matsco") held a security interest in a patent for a data recorder developed by Cybernetic Services, Inc.¹⁴¹ Matsco recorded the security interest with the State of California.¹⁴² Cybernetic's creditors then filed a Chapter 7 involuntary petition against Cybernetic, whose main asset was the patent.¹⁴³ In response, Matsco filed a motion for relief from the automatic stay to foreclose on the patent security interest.¹⁴⁴

The Ninth Circuit held that patent law did not preempt state law governing perfection of a security interest in patents.¹⁴⁵ The basis for this decision was the limited scope of transactions covered by the recording provision set forth in the Patent Act that extended only to ownership interests in patents.¹⁴⁶ Unlike the Copyright Act, the Patent Act does not mention mortgages, licenses, hypothecations, or similar terminology that could allow a security interest to fall under the Patent Act's scope.¹⁴⁷ Therefore, security interests in patents are perfected in accordance with Article 9.¹⁴⁸ The Ninth Circuit does not stand alone in its conclusion.¹⁴⁹ Other courts have also ruled that Article 9 governs perfection of security interests in patents.¹⁵⁰

141. *Cybernetic Servs.*, 252 F.3d at 1044 (a creditor relying on Article 9 properly perfected his security interest and prevailed over a trustee in bankruptcy).

142. *See id.*

143. *See id.*

144. *See id.*

145. *Id.* at 1039.

146. *See* 35 U.S.C. § 261 (2006).

147. *See Menell, supra* note 54, at 820.

148. *Id.*

149. At least three other federal bankruptcy courts have held that filing with the USPTO does not perfect security interests in patents. *See infra* note 150.

150. *See In re Pasteurized Eggs Corp.*, 296 B.R. 283, 290–92 (Bankr. D.N.H. 2003) (holding that a creditor did not perfect a security interest in debtor's patent by filing with the USPTO and debtor could exercise his strong-arm powers to avoid repayment obligations); *see also City Bank & Trust Co. v. Otto Fabric, Inc.*, 83 B.R. 780, 782 (Bankr. D. Kan. 1988); *see also In re Transp. Design & Tech., Inc.* 48 B.R. 635, 639 (Bankr. S.D. Cal. 1985).

2. *Coldwave Systems Differentiates Between Security Interests & Assignments*

In *Coldwave Systems*, a bankruptcy trustee of Coldwave Systems brought suit against Gateway Management Services Limited to avoid a security interest in a patent.¹⁵¹ The *Coldwave Systems* decision further iterated the definition of “assignment, grant or conveyance” as set forth in the Patent Act.¹⁵² The accepted doctrine is that “assignment, grant or conveyance” refers to a transfer in title, which is not the intent of a security interest.¹⁵³ The court likened a security interest in patents to a “mere license” falling outside the meaning of 35 U.S.C. § 261.¹⁵⁴ Given that a security interest in patents falls outside the scope of the Patent Act, the court held that state law (i.e. Article 9) governs perfection of security interests in patents.¹⁵⁵

3. *Rhone-Poulenc Argo Applies Federal Law to Protect Bona Fide Purchasers*

In 2002, *Rhone-Poulenc Argo, S.A. v. DeKalb Genetics Corp.* expanded the holding in *Cybernetic Services* by bringing up the issue that a subsequent purchaser or mortgagee of a patent has a defense under federal law against the holder of a security interest in patents.¹⁵⁶ Rhone-Poulenc was a biotechnology company in the business of developing genetic material.¹⁵⁷ Rhone-Poulenc sublicensed a patented technology to DeKalb, who in turn sublicensed to Monsanto.¹⁵⁸ Later, Rhone Poulenc filed suit against DeKalb and Monsanto on grounds that DeKalb procured its license fraudulently.¹⁵⁹ Monsanto defended its sublicense on grounds that it was a bona fide purchaser of the license.¹⁶⁰ The court reasoned that a bona fide purchaser in such a situation falls

151. *In re Coldwave Systems, L.L.C.*, 368 B.R. 91, 92–94 (Bankr. D. Mass. 2007).

152. *See id.* at 97.

153. *See id.*

154. *Id.*; *see also Pasteurized Eggs Corp.*, 296 B.R. at 283.

155. *See Coldwave Systems*, 368 B.R. 91.

156. *See Rhone-Poulenc Agro, S.A. v. DeKalb Genetics Corp.*, 284 F.3d 1323, 1323 (Fed. Cir. 2002).

157. *See id.* at 1325.

158. *See id.* at 1325–26.

159. *See id.* at 1326.

160. *See id.* at 1327.

within the scope of the Patent Act and thus, federal law governs matters relating to a bona fide purchaser.¹⁶¹ *Rhone-Poulenc Argo* further propagates the problem of dual filing practices.¹⁶² A UCC-1 filing only protects against future lien creditors, while recording with the USPTO is still necessary to protect against subsequent purchasers or mortgagees for value.¹⁶³

C. Trademarks

Trademarks can fall into three categories: "federally registered marks, state registered marks and common law marks."¹⁶⁴ State law generally regulates state registered marks and common law marks,¹⁶⁵ while the Lanham Act governs federally registered trademarks.¹⁶⁶ The Lanham Act mirrors the Patent Act on the issue of recordation by "creating a system limited to assignments of ownership interests."¹⁶⁷ Given that the attachment of a security interest does not constitute an assignment of rights, the Lanham Act, which only governs recordation of trademark assignments, does not apply.¹⁶⁸ Perfecting a security interest in a trademark under state law is similar to perfecting an interest in a patent because, in both cases, perfection is ineffective against subsequent purchasers.¹⁶⁹ Once again, although case law indicates that Article 9 governs perfection of security interests in trademarks, recordation with the USPTO is still necessary to protect a creditor against all third party claims.¹⁷⁰

161. See *id.* at 1328.

162. See *supra* Part B.

163. See *supra* Part B.

164. See Mills, *supra* note 119, at 749.

165. *Id.*

166. See Title 15, United States Code.

167. Menell, *supra* note 54, at 820.

168. See *Trimarchi v. Together Dev. Corp.*, 255 B.R. 606, 610 (Bankr. D. Mass. 2000).

169. See Mills, *supra* note 119, at 749.

170. See *id.*; see also *Trimarchi*, 255 B.R. at 610-11; *In re 199Z, Inc.*, 137 B.R. 778, 782 (Bankr. C.D. Cal. 1992) (holding that a USPTO filing did not perfect the creditor's security interest in a trademark because the Lanham Act refers only to assignments and not to "pledges, mortgages, or hypothecations of trademarks"); see also *In re Chattanooga Choo-Choo Co.*, 98 B.R. 792 (Bankr. E.D. Tenn. 1989) (holding that Article 9 governs perfection of a security interest in a trademark because the Lanham Act only covers registration of ownership and not notice of security interests); see also *Roman Cleanser Co. v. Nat'l*

D. The Blurred Line Between an Assignment and a Security Interest

Both the Patent and Lanham Acts contain a provision for recordation of assignments.¹⁷¹ Given the many similarities between the statutes governing patents and trademarks, the confusion over whether state or federal law governs perfection of a security interest extends to both forms of intellectual property. Thus, it is appropriate to discuss patent and trademark assignments collectively. Assignment of intellectual property rights can be determined by looking at indicators such as title and ownership of the intellectual property.¹⁷² The Patent and Lanham Acts, however, are both silent with regard to the filing of security interests.¹⁷³

1. Using Terminology to Justify Federal Filings

A scenario that seems to have stemmed from the distinction between an assignment and a security interest is the couching of a security interest in terms of a collateral assignment.¹⁷⁴ The rationale behind this trend is the belief that classifying a security interest as a collateral assignment enables the transaction to fall within the definition of assignment as set forth in the Patent and Lanham Acts.¹⁷⁵ For assignments, perfection is achieved by filing with the federal filing office, thus eliminating the need for filing with the state.¹⁷⁶

2. Undesirable Shift of Burdens From Debtors to Creditors

In representing a security interest as a collateral assignment, a creditor risks the interpretation of a security

Acceptance Co. of Am., 43 B.R. 940 (Bankr. E.D. Mich. 1984), *aff'd* 802 F.2d 207 (6th Cir. 1986) (holding that a security interest in debtor's trademark was perfected by state filing in compliance with Article 9); *see also In re TR-3 Indus.*, 41 B.R. 128, 131 (Bankr. C.D. Cal. 1984) (holding that the Lanham Act's recordation provision does not preempt Article 9 because Congress intended to omit a registration provision for security interests in trademarks).

171. Mills, *supra* note 119, at 750.

172. An "assignment" is the transfer of rights or property. BLACK'S LAW DICTIONARY 128 (8th ed. 2004).

173. Mills, *supra* note 119, at 750.

174. *See id.*

175. *See id.*

176. *See id.*

interest as a true assignment.¹⁷⁷ The danger of being categorized as an assignment is the shift of ownership of a patent or trademark from the debtor to the creditor,¹⁷⁸ leaving the creditor responsible for the maintenance of the intellectual property.¹⁷⁹ This shifting responsibility goes against the purpose of a security agreement: to impose such obligations on the debtor and not the creditor.¹⁸⁰

In a prototypical security agreement, a debtor usually bears the burden of ensuring that the value of the collateral is maintained.¹⁸¹ Failure to do so typically results in a default under the terms of the security agreement between the debtor and creditor.¹⁸² For intellectual property, maintenance generally refers to the obligation to ensure the intellectual property at issue remains in force.¹⁸³ For patents in particular, the debtor has to pay maintenance fees and engage in all necessary action to maintain the validity of the patent.¹⁸⁴ If the duties of ownership fall on the creditor as a result of labeling a security interest as a collateral assignment, a debtor can absolve liability for not complying with the provisions of his security agreement when he fails to maintain the value of the intellectual property collateral.¹⁸⁵ If the debtor can prove the duty to maintain the intellectual property shifted to the creditor, the creditor may be unable to recoup value from the collateral used to secure the debt of the debtor.¹⁸⁶

The duties of a trademark owner are further escalated beyond those of a patent owner by the added "responsibility of actively monitoring and policing the quality of all goods sold under the trademark."¹⁸⁷ Creditors are generally neither qualified to, nor interested in, undertaking this additional burden when they decide to make a loan.¹⁸⁸ Thus, trying to streamline filing to a single federal registry by calling a

177. *Id.*

178. *Id.*

179. *See* Mills, *supra* note 119, at 750–51.

180. *See id.*

181. *See* LOPUCKI & WARREN, *supra* note 9, at 255.

182. *See id.* at 258.

183. *See* Mills, *supra* note 119, at 751.

184. *Id.*

185. *See id.* at 750–51.

186. *Id.* at 751.

187. *Id.*

188. *Id.*

security interest a collateral assignment can result in grave consequences.¹⁸⁹ A creditor, especially one who is unsophisticated in understanding the nuances of intellectual property law, may be left with an unenforceable security interest and may “jeopardiz[e] the validity of the collateral.”¹⁹⁰

3. *No Blanket or Floating Lien Provisions*

In addition to the problems creditors create in attempting to steer security interests under the scope of federal governance, other issues arise as a result of the physical filing of security interests with the USPTO.¹⁹¹ The USPTO requires a separate filing for each patent or trademark.¹⁹² For a security agreement that includes the entire intellectual property portfolio of a debtor, individual filings result in hefty filing fees and a large amount of paperwork to cover the complete spectrum of patents and trademarks within the intellectual property portfolio.¹⁹³

Furthermore, the USPTO does not provide for the recordation of after-acquired property.¹⁹⁴ This especially poses a problem for patent collateral because “a patent for which a security interest is recorded may have a continuation, divisional, or continuation-in-part patent filed upon [it] at some point after the security agreement.”¹⁹⁵ Under the current procedures of the USPTO, new filings are required for each after-acquired patent or trademark.¹⁹⁶

189. Mills, *supra* note 119, at 751.

190. *Id.*

191. *Id.*

192. *Id.*

193. *See id.*

194. After-acquired property refers to property a debtor acquires after a security transaction that becomes additional security for payment of the debt. U.C.C. § 9-204 (2005). Blanket liens provide for the automatic perfection of after-acquired property. *See* Shawn K. Baldwin, “To Promote the Progress of Science and Useful Arts”: A Role for Federal Regulation of Intellectual Property as Collateral, 143 U. PA. L. REV. 1701, 1716–17 & n.79 (1995). The consequence of an inability to encumber after-acquired property results in the need to make a new filing for each newly owned interest in intellectual property assets. *See id.* at 1717 & n.79. The Copyright Act requires filing of documents that specifically identify the copyrighted asset and thus, a broadly encompassing clause covering future assets in a security agreement is ineffective. *See* 17 U.S.C. § 205(c)(1) (2006). Both the Patent and Lanham Acts contain similar restrictive language. *See* Baldwin, *supra*, at 1717 n.79.

195. Mills, *supra* note 119, at 751.

196. *Id.*

E. Consequences of Uncertainty: The Lack of Binding Case Law

The Supreme Court has yet to issue a decision that clarifies where to perfect security interests in intellectual property, leaving a patchwork of lower court decisions for debtors and creditors to sort through. Taking copyrights for example, *Peregrine's* holding that filing with the Copyright Office is the method of perfecting security interests in registered copyrights is only a district court decision, and as such, is only persuasive but not binding authority for other district courts.¹⁹⁷ This lack of binding precedent on the issue of perfection of security interests in intellectual property contributes to the current uncertainty existing in the commercial lending community.¹⁹⁸ Creditors, unsure of how courts would rule, cannot afford to take the risk of failing to file in the correct office.¹⁹⁹ Thus, creditors, or their legal representatives, double file at the state and federal levels to be sure their security interests are perfected and their loans secured.²⁰⁰ Given the unaddressed issues surrounding intellectual property law and secured transactions law, one cannot fault the current dual filing practice.²⁰¹ In fact, dual-filing is the prudent thing to do,²⁰² since failure to do so could easily leave a creditor without recourse to repayment of the loan it made in the event of the debtor's default.²⁰³

V. RESOLVING THE AMBIGUITY: PAST REFORM ATTEMPTS

The uncertainty of the law governing security interests in intellectual property has not gone unnoticed; there have been several attempts to address the ambiguity involved in the

197. See *In re Peregrine Entm't, Ltd.*, 116 B.R. 194 (Bankr. C.D. Cal. 1990).

198. See e.g., Jason A. Kidd, Casenote, *The Ninth Circuit Falls Short While Establishing the Proper Perfection Method for Security Interests in Patents in In re Cybernetic Services*, 36 CREIGHTON L. REV. 669, 715 (2003) (discussing lack of Supreme Court direction on the issue of the proper method for perfecting security interests in patents and that dual filing is the only way to be absolutely certain of complete protection).

199. See *supra* Part IV (discussing the different case precedents and their respective holdings).

200. See *Axe*, *supra* note 11, at 82–83.

201. See *id.*

202. See *id.* at 82.

203. See *supra* Part IV.

perfection of security interests in intellectual property.²⁰⁴ Over the past decade, legal experts have tried to arrive at a working consensus for legal reform.²⁰⁵ Thus far, attempts to reconcile intellectual property and secured transactions laws have been unsuccessful in producing an accurate and efficient perfection procedure for intellectual property collateral.²⁰⁶

A. The Federal Intellectual Property Act: A Mixed Approach

In 1999, the ABA created a task force in an attempt to propose a uniform federal filing system for security interests in intellectual property.²⁰⁷ The task force aimed to solve the substantial preemption problems that arise when creditors seek to perfect security interests in intellectual property.²⁰⁸ Specifically, it sought to address the uncertainty about whether state law or federal law governs the issue of extended time lapse between intellectual property registration and transfer recordation, and whether a change in intellectual property status warranted a shift from state protection to federal protection.²⁰⁹

That same year, the task force submitted the Federal Intellectual Property Security Act (FIPSA) to Congress. FIPSA's definition of intellectual property included copyrights (both registered and unregistered), federally registered trademarks, trademarks awaiting federal registration, patents, and pending patent applications.²¹⁰ FIPSA advanced a mixed approach that utilized federal and state filing systems for security interests in intellectual property governed by federal law.²¹¹ Under the mixed approach, a

204. See *infra* Part VI.A–D; see also Murphy, *supra* note 13, at 300 (discussing different proposals and then advocating for a centralized and integrated registry that compliments existing substantive federal or state laws by offering a central body of information to those seeking security interest information on intellectual property).

205. See *infra* Part V.A–D.

206. See Pauline Stevens, *Security Interests in Patents and Patent Applications?*, 6 U. PITT. J. TECH. L. & POL'Y 3, 48 (2005) (addressing the lack of success that FIPSA and the Commercial Finance Association's proposed Copyright Amendment had on clarifying the law governing perfection if the security interest is in intellectual property).

207. See Menell, *supra* note 54, at 822.

208. See Susan B. Montgomery, *Security Interests in Intellectual Property*, SM 088 ALI-ABA 373, 415 (2007).

209. See Menell, *supra* note 54, at 822.

210. See *id.*

211. See *id.*

creditor would choose either a federal or state filing depending on the protection it was seeking to achieve.²¹² For example, a UCC-1 filing would suffice to establish priority against other secured parties and lien creditors; however, to provide constructive notice and establish priority against bona fide purchasers and other transferees, a federal filing would be necessary.²¹³ In addition, FIPSA included filing and indexing methods, and imposed “prompt recordal requirements and elimination of grace periods.”²¹⁴ The task force also proposed the establishment of federal financing statements.²¹⁵

The task force advocated a centralized and integrated federal online database to reduce costs and enhance accessibility.²¹⁶ The proposed database would be searchable and would consolidate security interests in intellectual property in a single index.²¹⁷ Such a database would be supported by the current internet functionalities and improved search technologies, which have “brought about the capacity to leapfrog over antiquated state and federal recording systems . . . to a universal security interest database for all forms of intellectual property.”²¹⁸

Despite the apparent need for reform of the process for perfecting security interests in intellectual property, Congress has yet to act upon FIPSA’s proposition.²¹⁹ Although the ABA task force was unsuccessful, there have been some reforms that have provided needed, albeit minor, improvements. The USPTO and Copyright Office, for example, have “adopted document recordal forms and electronic record systems,” allowing the public easier search access to many of the records on file at no charge.²²⁰

212. See Montgomery, *supra* note 208, at 416.

213. See *id.*

214. *Id.*

215. *Id.*

216. See *id.*

217. See *id.*

218. Menell, *supra* note 54, at 822.

219. FIPSA was submitted to the House of Representatives on June 24, 2009, but no Bill was introduced in response to the proposed legislative changes. See Montgomery, *supra* note 208, at 415.

220. *Id.* at 416.

B. Amending the Copyright Act: A Non-preemption Approach

In 2000, Representatives George Gekas and Rick Boucher introduced The Security Interests in Copyright Financing Preservation Act in an effort to amend the Copyright Act.²²¹ The aim of the amendment was to provide clarification as to how creditors may perfect security interests in copyrightable collateral to protect against intervening claims from lien creditors and trustees in bankruptcy.²²²

The proposed amendment would only affect the rights of lien creditors and holders of security interests in copyrights,²²³ and would not alter the rights of bona fide purchasers and licensees of copyrights.²²⁴ Thus, a creditor who filed with the state would not be protected against bona fide purchasers and licensees that have the rights to take the collateral free and clear of any security interest.²²⁵ Creditors could still choose to file with the Copyright Office to establish airtight protection against all third parties.²²⁶

The non-preemption approach of The Security Interests in Copyright Financing Preservation Act calls for a radical change by expressly eliminating federal preemption of Article 9 for perfecting security interests in copyrights.²²⁷ This approach is modeled after the perfection procedure for security interests in unregistered copyrights and the proceeds of unregistered copyrights, a procedure that the Ninth Circuit held is governed by state law.²²⁸ The implementation of a non-preemption approach, however, still does not result in a simple single filing procedure.²²⁹ Although Article 9 determines perfection and priority against a secured party with a competing lien or trustee in bankruptcy, federal filing and the Copyright Act still govern priority among competing

221. See H.R. 4351, 106th Cong. (2d Sess. 2000). The bill sought to narrow sections 101 and 205 of the Copyright Act to prevent it from preempting the UCC with regard to the perfection of security interests in a copyright or copyrightable material. *See id.*

222. *See id.*

223. *See id.*

224. *See id.*

225. *See id.*

226. *See id.*

227. *See* Montgomery, *supra* note 208, at 416.

228. *See id.*

229. *Id.*

assignees.²³⁰ Furthermore, implementation of a non-preemption approach would reverse the holding of cases like *Peregrine* that are grounded in reasonable interpretations of federal law.²³¹

C. Coordinating Federal Recording and State Filing Systems

In 2001, the PTC Research Foundation of Franklin Pierce Law Center ("PTC Research Foundation") presented three model statutes to Congress, calling for a centralized or integrated perfection system for intellectual property collateral.²³² The model statutes aim to "creat[e] a centralized or integrated registry for security interests in intellectual property" to eliminate "structural obstacles to leveraging the value of intellectual property in secured transactions."²³³

The three model statutes proposed by the PTC Research Foundation were: the Intellectual Property Collateral Coordination Act, the Intellectual Property Security Interest Coordination Act, and the Intellectual Property Restoration Act.²³⁴ These three statutes serve as "alternative approaches to legislative reform" and offer different solutions "aimed at establishing a reliable and economically efficient filing system for the 'perfection' of security interests in federal intellectual property."²³⁵ Each model statute is founded upon a common "commitment to the notice filing and perfection structure of Article Nine."²³⁶ The proposed statutes all mandate a system that indexes entries based on the name of a debtor, instead of a "tract-type property number system" that is typical of "federal intellectual property recording statutes."²³⁷ A second commonality is that all three model statutes support the formation of a "single unified database . . . with access to or ownership of all security interest filings on federal intellectual property under one responsible agency charged

230. *Id.*

231. *Id.*

232. See Murphy, *supra* note 13, at 300.

233. *Id.* at 298.

234. See William Murphy, *Intellectual Property Collateral Coordination Act*, 41 IDEA 365 (2002); see also William Murphy, *Intellectual Property Security Interest Coordination Act*, 41 IDEA 387 (2002); see also William Murphy, *Security Interest in Intellectual Property Restoration Act*, 41 IDEA 405 (2002).

235. Murphy, *supra* note 13, at 356–57.

236. *Id.* at 357.

237. *Id.*

with setup and maintenance.”²³⁸ Similarities aside, the main difference among the three model statutes lies “in the degree to which they call for federal involvement in an integrated notice filing structure for security interests in federal intellectual property.”²³⁹

D. United Nations Commission on International Trade Law: A Modernizing Proposal

The United Nations Commission on International Trade Law (UNCITRAL) is also marching towards a unification of intellectual property law and commercial law.²⁴⁰ UNCITRAL’s legislative guide to secured transactions aims to assist countries by modernizing secured transactions law and promoting low-cost secured credit.²⁴¹ For example, it addresses controversial issues such as effectiveness of security interests against third parties and the need for an electronic centralized registry.²⁴² Although the United States is a member of UNCITRAL, UNCITRAL’s law reform proposals are not binding.²⁴³ These legal reforms and policies can, however, serve as a good reference to aid the United States in modernizing and harmonizing its secured transactions law with regard to intellectual property assets.²⁴⁴

VI. THE POTENTIAL BANDAID: A CONSOLIDATED PROPOSAL

Thus far, proposals made to abate confusion with regard to perfection of security interests in intellectual property have generally advocated for a single filing system that favors federal governance supplemented by state filing.²⁴⁵ There has

238. *Id.*

239. *Id.* at 359.

240. See UNITED NATIONS COMM’N ON INT’L TRADE LAW, UNCITRAL LEGISLATIVE GUIDE ON SECURED TRANSACTIONS 39–40 (2007), http://www.uncitral.org/pdf/english/texts/security-lg/e/09-82670_Ebook-Guide_09-04-10English.pdf.

241. Kiriakoula Hatzikiriakos & McMillan B. Mendelsohn, *UNCITRAL Focuses on Intellectual Property Financing*, CBA NATIONAL SECTION ON INTERNATIONAL LAW NEWSLETTER, Apr. 2007, available at <http://www.cba.org/CBA/newsletters/pdf/INTL-UNCITRAL.pdf>.

242. UNITED NATIONS COMM’N ON INT’L TRADE LAW, *supra* note 240, at Parts III and IV.

243. *Id.* at 39.

244. See *id.*

245. See *supra* Part V.

also, however, been a proposal for a national UCC filing system as a cost-efficient and accurate system to put creditors on notice of existing security interests in a particular collateral.²⁴⁶ An examination of the various reform proposals indicate the need for a single filing scheme, yet a solution that addresses all of the problems associated with perfecting security interests in intellectual property has not been implemented.²⁴⁷

The dissonance as to whether a federal system or a state system governs should be a secondary consideration. Regardless of whether a state or federal scheme is developed, the issues brought up in the analysis above still remain. The nuances of each Intellectual Property Act make it hard to declare a clear winner between federal filing and state filing.²⁴⁸ A better approach is to take a step back and focus on the purpose of the laws at issue and to develop a solution that can reconcile as much of the intended purposes of Article 9 with the Intellectual Property Acts.²⁴⁹ The following subsections identify the main reasons for the amendments addressed above and advocates for a filing system that is predictable, accurate, cost-efficient, and most importantly, realistically implementable.

A. *Purpose of Article 9's Filing Requirement*

The underlying principle of Article 9's UCC-1 filing requirement is to provide uniformity and stability in the marketplace.²⁵⁰ Although the physical filing of a security interest is a single procedure, filing serves two purposes.²⁵¹

246. See Bryan G. Bosta, *Bringing Article 9 Up to Speed: The Need for a National Filing System*, 31 U. DAYTON L. REV. 25 (2005).

247. A closer examination of the three model statutes in the appendices of the *Proposal for a Centralized and Integrated Registry for Security Interests in Intellectual Property* shows no corresponding federal bill numbers. See *Intellectual Property Collateral Coordination Act*, *supra* note 234, at 365; see also *Intellectual Property Security Interest Coordination Act*, *supra* note 234, at 387; see also *Security Interest in Intellectual Property Restoration Act*, *supra* note 234, at 405. This is indicative of the model statutes not making it to a congressional hearing and, as such, could not have been enacted.

248. See *supra* Part IV.

249. See Murphy, *supra* note 13, at 356–57.

250. See Smith and Spidahl Enters., Inc. v. Lee, 557 N.W.2d 865 (Wis. Ct. App. 1996).

251. See Melvin Simensky, *The New Role of Intellectual Property in Commercial Transactions*, 10 ENT. & SPORTS LAW 5, 7–8 (1992).

First, filing perfects a creditor's security interest.²⁵² Second, filing provides constructive notice to searchers trying to obtain information with regard to title, ownership, and status of the intellectual property.²⁵³

B. One Filing Satisfies All: Injecting Predictability Into the Filing Process

The U.S. legal system has never advocated the current practice of dual filing, and there is no indication that Congress intended the current practice of perfecting security interests by requiring filing at both the state and federal levels.²⁵⁴ Case law, however, does not appear to encourage the other extreme of achieving perfection by filing at either a state or federal level. As *Peregrine* stated, "no useful purpose would be served—indeed, much confusion would result—if creditors were permitted to perfect security interests by filing with either the Copyright Office or state offices."²⁵⁵ Thus, there is a need for a single, clearly identified place of filing to perfect security interests in intellectual property that can benefit both creditors and searchers of security interests. A recordation system that allows interested parties to determine encumbrances by searching in a consolidated database and allows them to perfect security interests against all other parties with a single filing will phase out parallel recordation in the form of dual filing.²⁵⁶

After establishing that a single database is ideal, the next consideration is to evaluate whether the single database should be federal or state. Intellectual property is an intangible and lacks an identifiable situs.²⁵⁷ This characteristic "militates against individual state filings and in favor of a single, national filing scheme."²⁵⁸ Congress could decide to completely defer to the existing federal Intellectual Property Acts in adopting a nationalized scheme. This plan, however, would require amending the respective federal

252. *See id.*

253. *See id.*

254. *See In re Peregrine Entm't, Ltd.*, 116 B.R. 194, 200–02 (Bankr. C.D. Cal. 1990).

255. *Id.* at 200.

256. *See id.* at 200–02.

257. *See id.* at 201.

258. *Id.*

intellectual property statutes to clearly indicate that federal law preempts state law with regard to security interests in intellectual property. Given that federal intellectual property law already exists, relying on Intellectual Property Acts that have been amended to address perfection concerns will also cut down on the resources needed to implement a completely new system. The challenge with adopting a federal system stems from getting Congress to take affirmative steps to include provisions in the existing federal intellectual property statutes that directly address secured transactions.²⁵⁹

C. *Maneuvering Around Preemption*

Federal law regulates intellectual property assets and, consequently, state legislatures have no power to resolve the current inconsistencies between federal intellectual property and state laws without permission from Congress.²⁶⁰ Furthermore, since the extent of preemption depends on the language of federal statutes, amendments are needed to provide a clear and uniformly applicable definition of the “when” and the “extent” of federal preemption in relation to Article 9.²⁶¹ Past reforms have yet to correct this problem and no federal legislation is currently in the works.²⁶²

The barrier for effecting legislative change is extremely high as reflected by the lack of success of previous proposals.²⁶³ Congress’ past lukewarm reception to change is, however, not dispositive.²⁶⁴ In the future, a persuasive resolution as to the ambiguity of where and how to perfect security interests in intellectual property could still be embraced and implemented,²⁶⁵ especially in light of the changing needs of society and its increasing reliance on intellectual property in secured loan transactions.²⁶⁶ For example, a single neutral database would not conflict with preemption rules nor would it violate Article 9’s uniformity purpose.²⁶⁷ Such a neutral database could be modeled after

259. See Bosta, *supra* note 246, at 42.

260. See Montgomery, *supra* note 208, at 415.

261. See *supra* Part III.

262. See Montgomery, *supra* note 208, at 376.

263. See Bosta, *supra* note 246, at 42; see also *supra* note 247.

264. See, e.g., *supra* note 247.

265. See, e.g., *supra* note 247.

266. See Murphy, *supra* note 13, at 297.

267. See *supra* Part IV.C.

the proposed centralized and integrated registry proposed by the PTC Research Foundation.²⁶⁸

D. Enacting a Neutral Database: Focusing on First to File Not Where to File

The central purpose of perfecting a security interest is to establish priority. Thus, the essence of perfection should lie in timing and not the location of the filing. A neutral database would eliminate the concern about the correct place of filing.²⁶⁹ Recordation with the neutral database would award the same protection as either a valid state or federal filing with regard to giving constructive notice and establishing priority against third parties.²⁷⁰

A neutral database would also circumvent circumlocution that could result in a decline in the value of intellectual property collateral when creditors try to couch their security interests in terms that would enable them to get federal protection.²⁷¹ A neutral database would, thus, increase accuracy as to the security interest at stake. Classifications would be straightforward because there would be no need to try and couch security interests in language befitting of either state or federal protection.

Further, a neutral filing system “would not supplant the existing substantive federal or state laws, but rather, would compliment them by offering a central information forum that would be available to anyone seeking security interest information on intellectual property.”²⁷² In other words, the neutral database would collect both state and federal filings, making it simple to determine priority. Thus, creditors could be assured in their priority by complying with the precedent set by current case law with regard to whether a state or federal filing should be made for intellectual property collateral because the filings with the state or federal intellectual property offices would be duplicated in the neutral database for easy reference by searchers.

268. See Murphy, *supra* note 13, at 300.

269. See *id.*

270. See *supra* Part VI.C.

271. See *supra* Part IV.D.

272. Murphy, *supra* note 13, at 356–57.

E. Electronic Filing and Consolidation of Security Interests

To be effective, a single filing database would have to reconcile the differences between title-based federal registries and debtor-specific state recordation.²⁷³ The boom of reliance on intellectual property assets as collateral is reflective of the technological advances of today's society.²⁷⁴ By capitalizing on these advances, a sophisticated electronic database can be set up to facilitate a cost and time efficient system of perfecting security interests in intellectual property.²⁷⁵

Electronic filing with the neutral database would be available either via a state or federal filing office. The key to the success of the neutral database is electronic transmission of all filings made, regardless of location, to the neutral database. The state filing offices and federal intellectual property offices would be electronically linked, and when security interests in intellectual property are filed in either location, the information would be consolidated in the neutral database.²⁷⁶

1. Cost-Efficiency

Legal uncertainties increase costs of secured transactions because creditors tend to take more precautions to ensure their security interest is enforceable.²⁷⁷ Higher costs reduce the willingness of creditors to lend against intellectual property collateral, and ultimately stunt the growth of secured transactions in intellectual property.²⁷⁸ A single database gives creditors and third parties certainty and predictability with regard to their rights and expectations in

273. See Hatzikiriakos & Mendelsohn, *supra* note 241, at 2.

274. See Axe, *supra* note 11, at 62.

275. Costs can be reduced because a single filing will mean less paperwork and thus less labor. Furthermore, implementation of an electronic database should also facilitate lower filing fees. The speed of online connectivity will also allow for quicker processing and indexing of filings made, resulting in a system with increased accuracy and efficiency.

276. Replication of information by linking databases will reduce the error rate with regard to the collection of information. Furthermore, in the event of an error, the error is replicated and will keep relevant filings together. This aspect makes it easier to trace related records and reduce the chance of searchers getting false clean searches, i.e., a search that shows no other holder of a conflicting security interest.

277. See HATZIKIRIAKOS, *supra* note 42, at 7.

278. See *id.* at 6.

achieving adequate protection for their security interests.²⁷⁹

2. *Increased Search Functions*

Electronic filing and database management is not only cheaper as compared to a paper-based system,²⁸⁰ but it also allows a creditor to access information regardless of the debtor's location.²⁸¹ An integrated database limits filing and searching costs by acting as the sole information source for secured transactions.²⁸²

An electronic system also has a better chance at reducing the rate of filing errors. Paper filing carries a higher risk of filing errors because of the physical filing and searching of financing statements.²⁸³ For example, besides the errors made in the completion of the form, hard copy filing is subject to human error such as clerks misfiling the document or forgetting to return the document after pulling it from existing records. Although it is true that errors will still exist in electronic databases—for example, by way of acceptance of an inaccurate filing or an erroneously completed filing statement—enhanced search logic algorithms could help mitigate such problems.²⁸⁴

Linking the already electronic federal databases of the Copyright Office and the USPTO will also help reduce filing errors because only a single filing would be made, and filings containing errors would be more easily tracked since existing mistakes would not be further compounded. An electronic system would also make it possible for the title-based federal registries to be rearranged by filters and advanced search functions into a debtor-specific manner upon transmission to the neutral security interest database.²⁸⁵

3. *Easy Access to Information*

An electronic database also provides easy access to up-to-date information by reducing the lag time between the

279. See Bosta, *supra* note 246, at 32.

280. See *id.* at 32.

281. See *id.* at 32–33.

282. *Id.* at 33.

283. See *id.*

284. See *id.*

285. Improvement in search logic technology would enable programmers to manipulate and present software in an easy-to-search manner, and would allow programmers to consolidate dates more efficiently.

physical filing of a financing statement and when it is reflected in the filing office's records.²⁸⁶ It also consolidates all the security interests under a debtor's name regardless of location.²⁸⁷ This approach helps creditors better identify the risks involved in making loans to debtors by allowing them to be aware of any existing priorities.²⁸⁸

4. *Cost of Computerization*

An obstacle in implementing an electronic filing system is the high start-up cost.²⁸⁹ Such an initial expense, however, would be required to achieve a more efficient system.²⁹⁰ Furthermore, once completely computerized, expenses will plateau because most of the spending will happen at the outset.²⁹¹

VII. CONCLUSION

The problem of where and how to perfect security interests in intellectual property has taken center stage since the advent of conflicting case law more than a decade ago, and in response to the increasing economic significance of intellectual property.²⁹² Unfortunately, reform attempts remain mostly theoretical and there is a lack of momentum to implement a feasible working solution.²⁹³ Uncertainty begets mistakes and leaving the situation unchanged could result in a snowball of consequences that could seriously damage the value of intellectual property assets as collateral. Congress must enact a solution to eradicate the confusion regarding perfection requirements to "assure creditors that compliance with these requirements will secure interests in intellectual property collateral."²⁹⁴ The implementation of an electronic, neutral database that consolidates all security interests in intellectual property will provide an efficient and predictable filing system for both searchers and filers. This database will, in turn, boost creditors' confidence in intellectual

286. See Bosta, *supra* note 246, at 34.

287. See *id.* at 35.

288. See *id.*; see also Murphy, *supra* note 13, at 356-57.

289. See Bosta, *supra* note 246, at 41.

290. See *id.*

291. See *id.*

292. See *supra* Part V.

293. See *supra* Part VI.

294. Murphy, *supra* note 13, at 300.

property collateral and increase credit availability for intellectual property assets.²⁹⁵

295. See Hatzikiriakos & Mendelsohn, *supra* note 241, at 1.
